

WHAT IS CLAIMED IS:

1 1. A node-search method in a network, comprising the  
2 steps of:  
3 acquiring a packet which includes routing information  
4 in which a domain in the network is listed;  
5 sending a broadcast packet, for requesting a response  
6 from a node which provides a specific service, to said  
7 domain which is listed in said acquired routing  
8 information; and  
9 receiving a response packet for said broadcast packet  
10 and detecting the node which sent the response packet.

1 2. A node-search method in a network, comprising the  
2 steps of:  
3 sending a packet, for requesting routing information  
4 from the network which is connected to an interworking  
5 unit, to the interworking unit, which is capable of storing  
6 routing information set in advance;  
7 receiving a packet containing said routing  
8 information;  
9 sending a broadcast packet, for requesting a response  
10 from a node that provides a specific service, to a domain  
11 which is listed in said received routing information; and  
12 receiving a response packet in response to said  
13 broadcast packet, and detecting the node which sent the

14 response packet.

1 3. A node-search method for searching for a node  
2 providing service in a network configured with a plurality  
3 of domains, comprising:

4 a first process for searching for all of the domains  
5 of the network, and

6 a second process for searching for nodes which provide  
7 a specific service in at least one of the domains which is  
8 contained in a search result in said first process.

1 4. A node-search method in a network, comprising the  
2 steps of:

3 receiving a RIP (Routing Information Protocol) packet;

4 acquiring information indicating a network number and  
5 an address of a router of each domain in the network from  
6 said received RIP packet; and

7 broadcasting, based on said acquired information, into  
8 a specific network so as to search for a node, using a  
9 specific port number.

1 5. A node-search device for searching for a node in a  
2 network, comprising:

3 network interface means for connecting with the  
4 network;

5 means for acquiring domain information from a packet

6 containing routing information which was acquired by said  
7 network interface means;

8 means for finding broadcast addresses for said  
9 domains;

10 means for generating a request packet to be sent to  
11 said found broadcast addresses for finding a response from  
12 a node which provides a specific service, and sending the  
13 packet to the network through said network interface means;  
14 and

15 means of extracting information indicating that  
16 indicates nodes which perform said specific service, which  
17 is contained in a response packet to said request packet.

1 6. A node-search device for searching for a node in a  
2 network, comprising:

3 means for sending a packet, for requesting routing  
4 information for a network connected to an interworking  
5 unit, to the interworking unit, which is capable of storing  
6 preset routing information;

7 means for receiving a packet containing said routing  
8 information and acquiring information indicating a node  
9 contained in said routing information;

10 means for sending a request packet, for requesting a  
11 response from a node which provides a specific service,  
12 which is broadcasted domains connected through the  
13 interworking unit, to the interworking unit; and

14 means for receiving a response packet for said request  
15 packet and detecting the node which sent the response  
16 packet.

1 7. A computer-readable storage medium in which a program  
2 which is executed by a computer for searching for a node in  
3 a network is recorded, wherein:

4 said program makes the computer execute:

5 a process of acquiring a packet containing routing  
6 information in which a domain in the network is listed,  
7 which is sent to the network;

8 a process of sending a broadcast packet, for  
9 requesting a response from a node which provides a specific  
10 service, to said domain which is listed in said acquired  
11 routing information; and

12 a process of receiving a response packet for said  
13 broadcast packet and detecting the node which sent the  
14 response packet.

1 8. A computer-readable storage medium in which a program  
2 which is executed by a computer for searching for a node in  
3 a network is recorded, wherein:

4 said program makes the computer execute:

5 a process of sending a packet, for requesting routing  
6 information in the network which is connected to an  
7 interworking unit, to the interworking unit, which is

8 capable of storing routing information set in advance;

9 a process of receiving a packet containing said

10 routing information;

11 a process of sending a broadcast packet for requesting

12 a response from a node which provides a specific service,

13 to a domain which is listed in said received routing

14 information; and

15 a process of receiving a packet in response to said

16 broadcast packet, and detecting the node which sent the

17 response packet.

1 9. A storage medium in which a program is stored,

2 according to Claim 8, wherein:

3 said interworking unit is a router.

1 10. A computer-readable storage medium for storing a

2 program which is executed by a computer for searching for a

3 service providing node in a network configured with a

4 plurality of domains, wherein:

5 said program makes the computer execute:

6 a first process for searching for all of the domains

7 of the network, and

8 a second process for searching for a node providing a

9 specific service in at least one of the domains which is

10 contained in a search result in said first process.

1 11. A storage medium in which a program is recorded,  
2 according to Claim 10, wherein said program makes the  
3 computer execute the steps of:

4 in said first process, sending a packet requesting  
5 routing information to a device in which the routing  
6 information is stored so as to acquire information  
7 indicating the domains, and

8 in said second process, receiving operation designating  
9 at least one domain from said acquired information  
10 indicating the domains, broadcast sending a server name  
11 request packet requesting a node name of the node providing  
12 the specific service to the designated domain, and creating  
13 a server list from server names contained in a response  
14 packet for the server name request packet.

1 12. A storage medium in which a program is recorded,  
2 according to Claim 11, wherein said program further makes  
3 the computer execute the steps of:

4 in said second process, receiving operation  
5 designating the kind of the service which is provided by  
6 said node, and broadcast sending a server name request  
7 packet for requesting a node name of a node providing the  
8 designated service.

1 13. A computer-readable storage medium in which a program  
2 which is executed by a computer for searching for a service

3 providing node in a network configured with a plurality of  
4 domains is recorded, wherein:

5 said program makes the computer execute:

6 a process of receiving a RIP (Routing Information  
7 Protocol) packet;

8 a process of acquiring information indicating a  
9 network number and mail address of each domain in the  
10 network from said received RIP packet; and

11 a process of broadcasting, based on said acquired  
12 information, into a specific network so as to search for a  
13 node, using a specific port number.

1 14. A computer-readable storage medium in which a program  
2 which is executed by a computer for searching for a service  
3 providing node in a network configured with a plurality of  
4 domains, wherein:

5 said program makes the computer execute:

6 a process of receiving an SNMP (Simple Network  
7 Management Protocol) packet;

8 a process of acquiring information indicating a  
9 network number and an address of a router of each domain in  
10 the network from the received SNMP packet;

11 a process of broadcasting into a specific network,  
12 based on said acquired information so as to search for a  
13 node, using a specific port number.